

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Canceled):

Claim 2 (Currently Amended): The substrate according to claim 1 14, wherein the organic polymer is selected from conjugated polymers.

Claim 3 (Currently Amended): The substrate according to claim 1 14, wherein the organic polymer is selected from oligomeric pentacene, poly(thienylene vinylene) or poly-3 alkylthiophene.

Claim 4 (Currently Amended): The substrate according to Claim 1 14, wherein the integrated circuit is a contactlessly readable integrated circuit which can be read in an inductive or capacitive manner.

Claim 5 (Currently Amended): The substrate according to claim 1 14, wherein the substrate comprises a conductive security thread which is connected to the integrated circuit or circuits, which security thread serves as a contact for readout operations and for current supply.

Claim 6 (Previously Presented): The substrate according to claim 5, wherein the integrated circuit forms part of the security thread.

Claim 7 (Previously Presented): The substrate according to claim 5, wherein the security thread has a thickness which lies in the range of from 5-60% of the thickness of the substrate.

Claim 8 (Canceled):

Claim 9 (Currently Amended): The substrate according to claim ~~1~~ 14, wherein the integrated circuit comprises a preprogrammed code which is applied before incorporating the circuit in the substrate.

Claim 10 (Currently Amended): A substrate according to claim ~~1~~ 14, wherein the integrated circuit comprises a code of an intrinsic property of the substrate, which code, after the substrate has been produced, is arranged in the integrated circuit.

Claim 11 (Previously Presented): The substrate according to claim 9, wherein the code is an encrypted code.

Claim 12 (Currently Amended): The substrate according to claim ~~1~~ 14, wherein the substrate comprises additional security features.

Claim 13 (Previously Presented): The substrate according to claim 12, wherein an additional security feature is selected from a dye, fluorescent material, luminescent material or phosphorescent material.

Claim 14 (Currently Amended): A security paper comprising a substrate ~~according to claim 1~~ which is made from paper and at least one integrated circuit, wherein the integrated circuit is flexible and comprises a semiconductive organic polymer.

Claim 15 (Currently Amended): A security document comprising a substrate ~~according to claim 1~~ which is made from paper and at least one integrated circuit, wherein the integrated circuit is flexible and comprises a semiconductive organic polymer.

Claim 16 (Previously Presented): A security thread comprising an insulating support bearing a flexible integrated circuit comprising a semiconductive organic polymer, provided with electrical contacts for the integrated circuit.

Claim 17 (Previously Presented): An optically active element comprising a flexible integrated circuit comprising a semiconductive organic polymer, provided with electrical contacts for the integrated circuit.

Claim 18 (Canceled):

Claim 19 (Currently Amended): The substrate according to Claim 1 ~~14~~, which further comprises an insulating layer on said semiconductive organic polymer.

Claim 20 (Canceled):

Claim 21 (Canceled):

Claim 22 (Previously Presented): The security paper according to Claim 14, which is a banknote.

Claim 23 (Previously Presented): The security document according to Claim 15, which is a passport.

Claim 24 (Previously Presented): The security document according to Claim 15, which is an identity card.

Claim 25 (Previously Presented): The security document according to Claim 15, which is a security.

Claim 26 (Currently Amended): The substrate according to Claim 8 58, wherein the optical active element is selected from the group consisting of a foil, a hologram and a kinegram.

Claim 27 (Currently Amended): The security paper of Claim 14, further comprising  
~~A substrate made from paper comprising:~~

~~at least one flexible integrated circuit comprising a semiconductive organic polymer;~~  
and

a conductive security thread;

wherein the conductive security thread is connected to the integrated circuit.

Claim 28 (Previously Presented): The substrate of Claim 27, wherein the integrated circuit forms part of the security thread.

Claim 29 (Previously Presented): The substrate of Claim 27, wherein the security thread has a thickness of 5-60% of the thickness of the substrate.

Claim 30 (New): The substrate according to claim 15, wherein the organic polymer is selected from conjugated polymers.

Claim 31 (New): The substrate according to claim 15, wherein the organic polymer is selected from oligomeric pentacene, poly(thienylene vinylene) or poly-3 alkylthiophene.

Claim 32 (New): The substrate according to Claim 15, wherein the integrated circuit is a contactlessly readable integrated circuit which can be read in an inductive or capacitive manner.

Claim 33 (New): The substrate according to Claim 15, wherein the integrated circuit forms part of an optical active element.

Claim 34 (New): The substrate according to claim 15, wherein the integrated circuit comprises a preprogrammed code which is applied before incorporating the circuit in the substrate.

Claim 35 (New): A substrate according to claim 15, wherein the integrated circuit comprises a code of an intrinsic property of the substrate, which code, after the substrate has been produced, is arranged in the integrated circuit.

Claim 36 (New): The substrate according to claim 34, wherein the code is an encrypted code.

Claim 37 (New): The substrate according to claim 15, wherein the substrate comprises additional security features.

Claim 38 (New): The substrate according to claim 37, wherein an additional security feature is selected from a dye, fluorescent material, luminescent material or phosphorescent material.

Claim 39 (New): The substrate according to claim 16, wherein the organic polymer is selected from conjugated polymers.

Claim 40 (New): The substrate according to claim 16, wherein the organic polymer is selected from oligomeric pentacene, poly(thienylene vinylene) or poly-3 alkylthiophene.

Claim 41 (New): The substrate according to Claim 16, wherein the integrated circuit is a contactlessly readable integrated circuit which can be read in an inductive or capacitive manner.

Claim 42 (New): The substrate according to Claim 16, wherein the integrated circuit forms part of an optical active element.

Claim 43 (New): The substrate according to claim 16, wherein the integrated circuit comprises a preprogrammed code which is applied before incorporating the circuit in the substrate.

Claim 44 (New): A substrate according to claim 15, wherein the integrated circuit comprises a code of an intrinsic property of the substrate, which code, after the substrate has been produced, is arranged in the integrated circuit.

Claim 45 (New): The substrate according to claim 43, wherein the code is an encrypted code.

Claim 46 (New): The substrate according to claim 16, wherein the substrate comprises additional security features.

Claim 47 (New): The substrate according to claim 46, wherein an additional security feature is selected from a dye, fluorescent material, luminescent material or phosphorescent material.

Claim 48 (New): The substrate according to claim 17, wherein the organic polymer is selected from conjugated polymers.

Claim 49 (New): The substrate according to claim 17, wherein the organic polymer is selected from oligomeric pentacene, poly(thienylene vinylene) or poly-3 alkylthiophene.

Claim 50 (New): The substrate according to Claim 17, wherein the integrated circuit is a contactlessly readable integrated circuit which can be read in an inductive or capacitive manner.

Claim 51 (New): The substrate according to Claim 17, wherein the integrated circuit forms part of an optical active element.

Claim 52 (New): The substrate according to claim 17, wherein the integrated circuit comprises a preprogrammed code which is applied before incorporating the circuit in the substrate.

Claim 53 (New): A substrate according to claim 17, wherein the integrated circuit comprises a code of an intrinsic property of the substrate, which code, after the substrate has been produced, is arranged in the integrated circuit.

Claim 54 (New): The substrate according to claim 52, wherein the code is an encrypted code.

Claim 55 (New): The substrate according to claim 17, wherein the substrate comprises additional security features.

Claim 56 (New): The substrate according to claim 55, wherein an additional security feature is selected from a dye, fluorescent material, luminescent material or phosphorescent material.



Claim 57 (New): The security paper of Claim 15, further comprising  
a conductive security thread;  
wherein the conductive security thread is connected to the integrated circuit.

Claim 58 (New): The substrate according to Claim 14, wherein the integrated circuit  
forms part of an optical active element.

Claim 59 (New): The substrate according to Claim 15, which further comprises an  
insulating layer on said semiconductive organic polymer.

Claim 60 (New): The substrate according to Claim 16, which further comprises an  
insulating layer on said semiconductive organic polymer.

Claim 61 (New): The substrate according to Claim 17, which further comprises an  
insulating layer on said semiconductive organic polymer.

BASIS FOR THE AMENDMENT

Claims 3-17, 19 and 22-61 are active in the present application. Claims 1-2, 8, 18 and 20-21 have been cancelled. Claims 14 and 15 have been amended to include the limitations of previous Claims 1 and 2 respectively. New Claim 58 corresponds with previously presented Claim 8. Claims 14 and 15 are now independent claims. Claims 2-4, 8-13 and 19 have been amended in accordance with the amendment to Claims 14 and 15. Claim 27 has been amended to depend from Claim 14. Claims 30-61 are new dependent claims. Support for the new dependent claims is found in the original claims. No new matter is believed to have been added by this amendment.